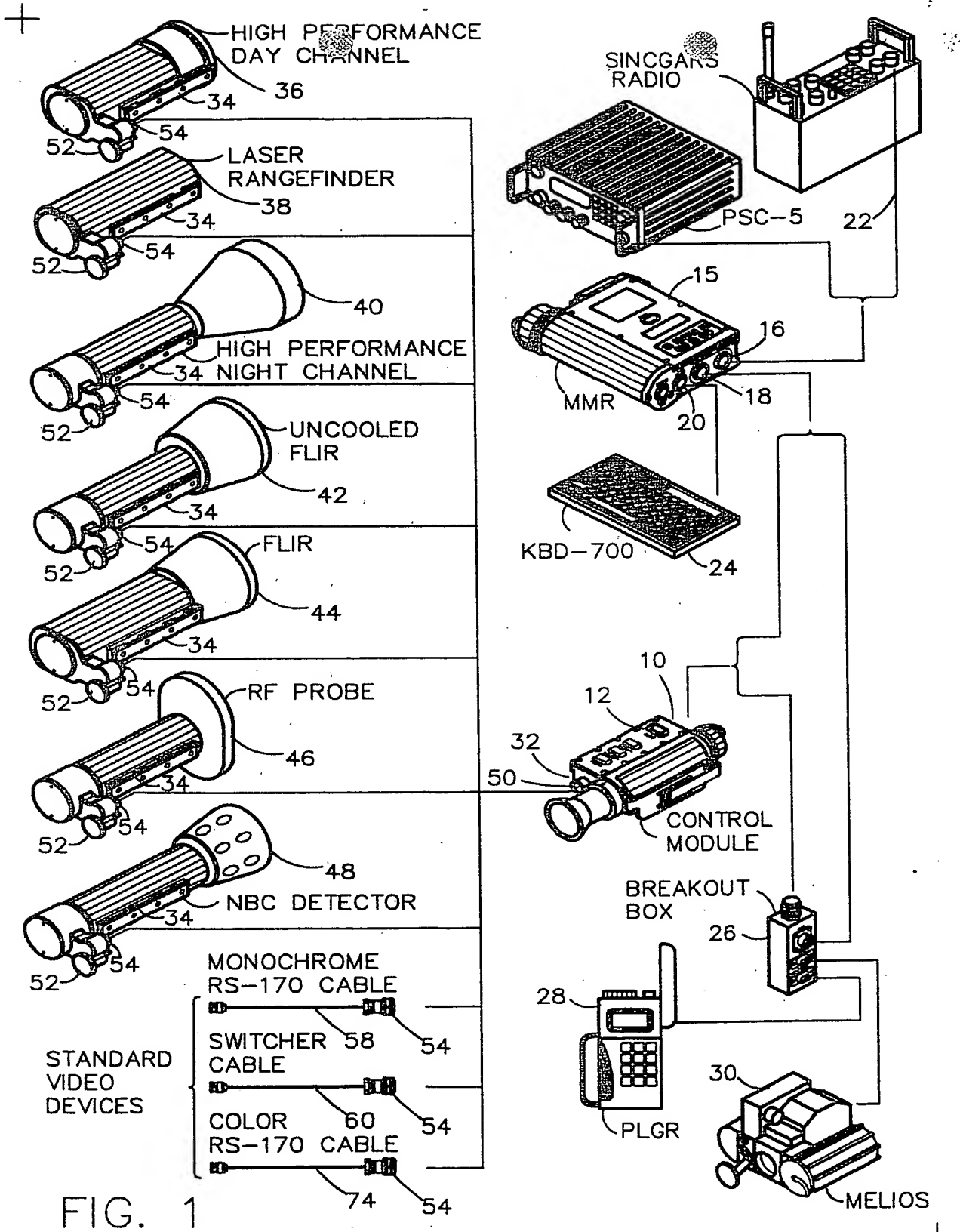

HIGH PERFORMANCE DAY CHANNEL
36
34
54
52
LASER RANGEFINDER
38
34
54
52
40
HIGH PERFORMANCE NIGHT CHANNEL
34
54
52
UNCOOLED FLIR
42
34
54
52
FLIR
44
34
54
52
RF PROBE
46
34
54
52
48
NBC DETECTOR
34
54
52
MONOCHROME RS-170 CABLE
SWITCHER CABLE
58
COLOR RS-170 CABLE
60
74
54
STANDARD VIDEO DEVICES
SINCGARS RADIO
PSC-5
22
15
16
MMR
18
20
KBD-700
24
10
12
32
50
CONTROL MODULE
BREAKOUT BOX
26
28
PLGR
30
MELIOS

FIG. 1

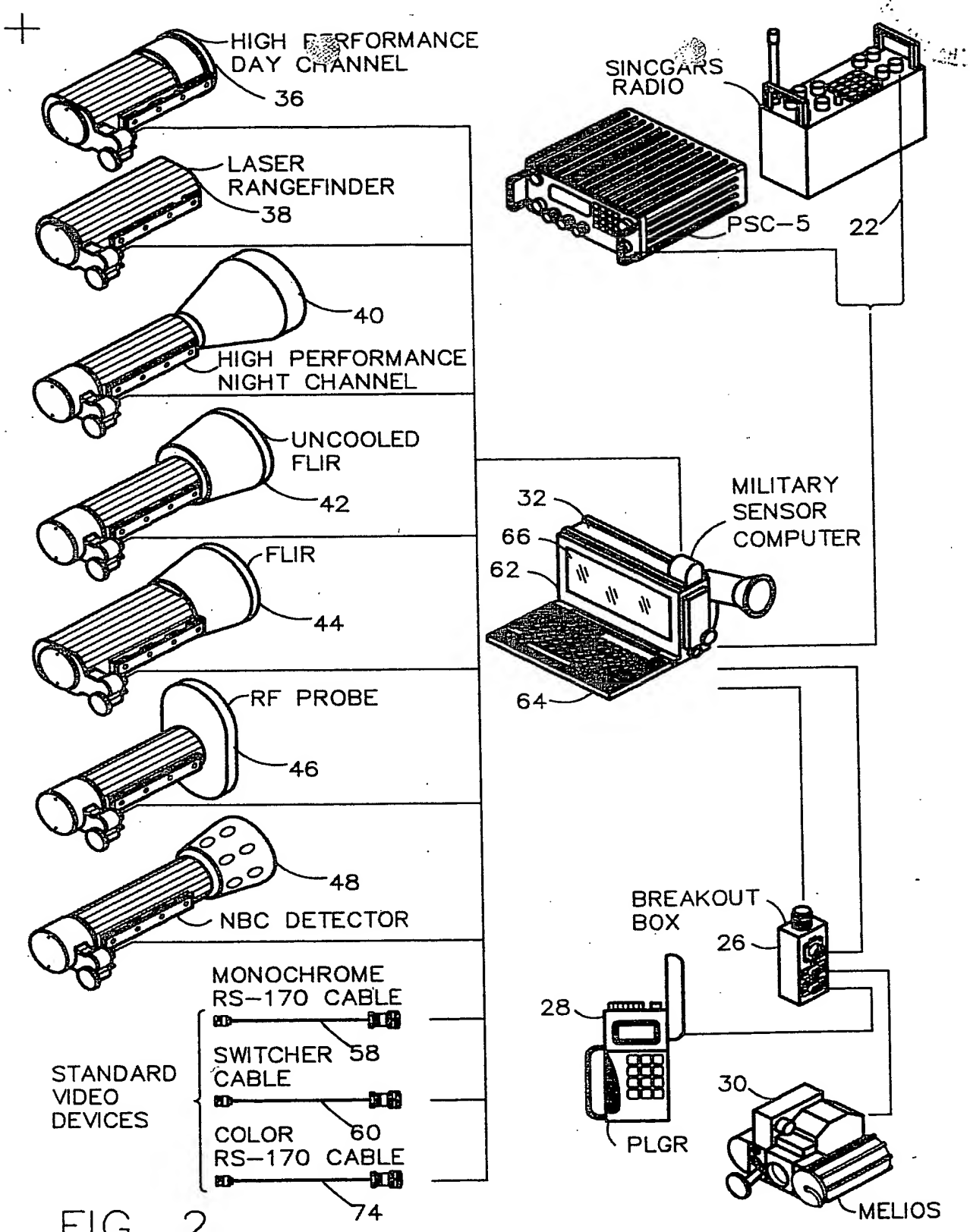

HIGH PERFORMANCE DAY CHANNEL
36
LASER RANGEFINDER
38
40
HIGH PERFORMANCE NIGHT CHANNEL
UNCOOLED FLIR
42
FLIR
44
RF PROBE
46
48
NBC DETECTOR
MONOCHROME RS-170 CABLE
58
SWITCHER CABLE
60
COLOR RS-170 CABLE
74
STANDARD VIDEO DEVICES
SINCGARS RADIO
PSC-5
22
32
66
62
64
MILITARY SENSOR COMPUTER
BREAKOUT BOX
26
28
PLGR
30
MELIOS

FIG. 2

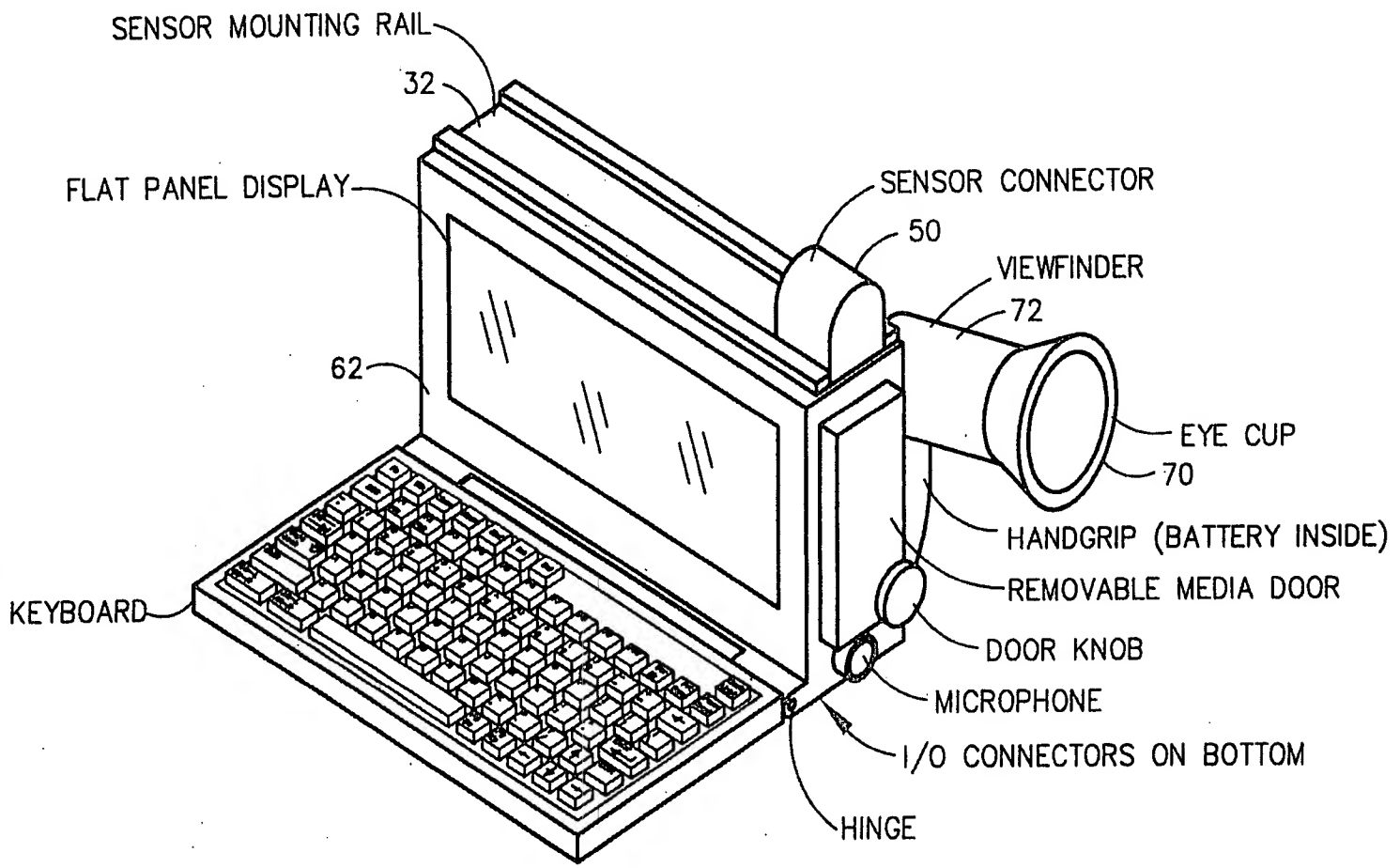


FIG. 3

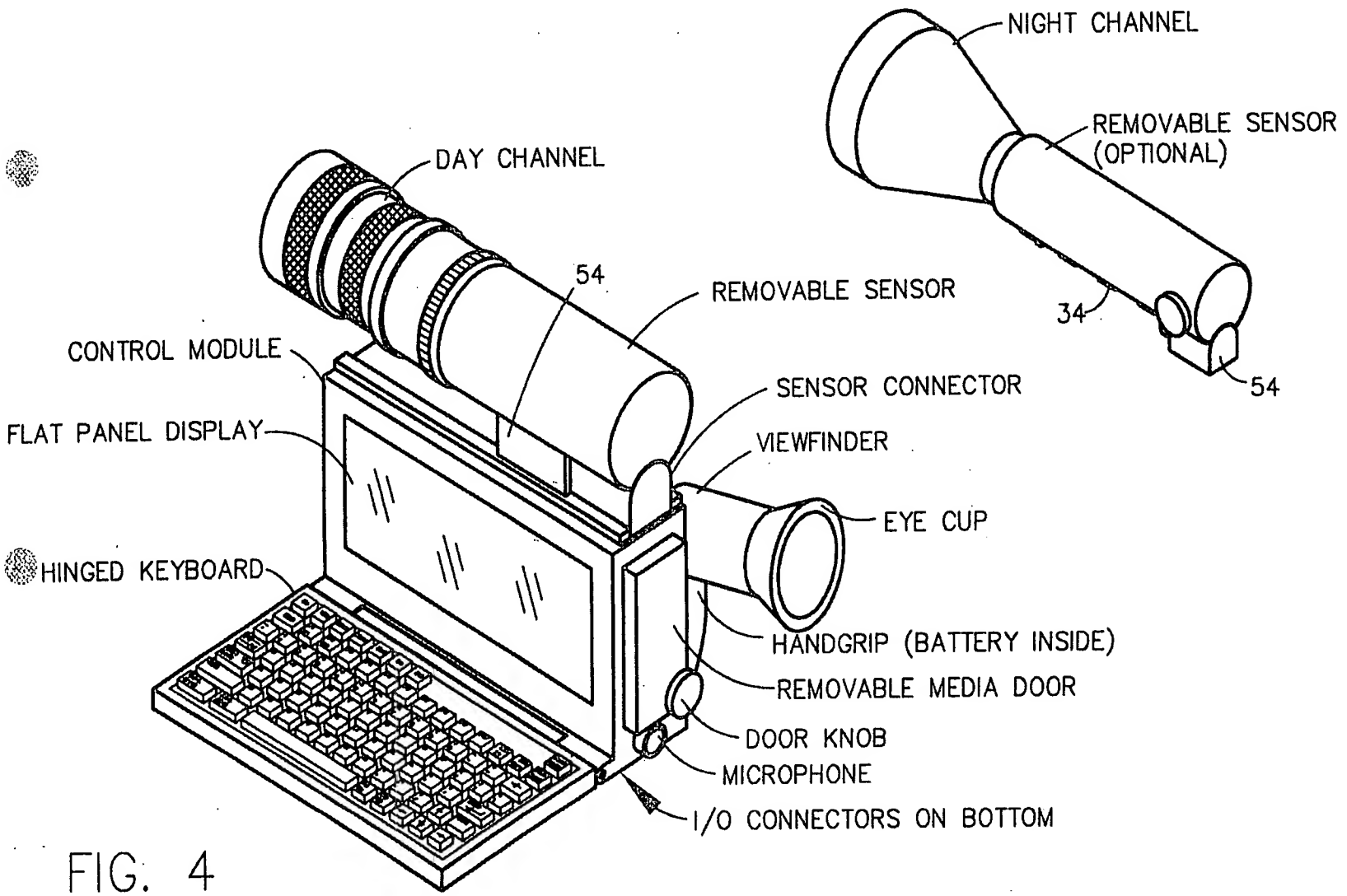


FIG. 4

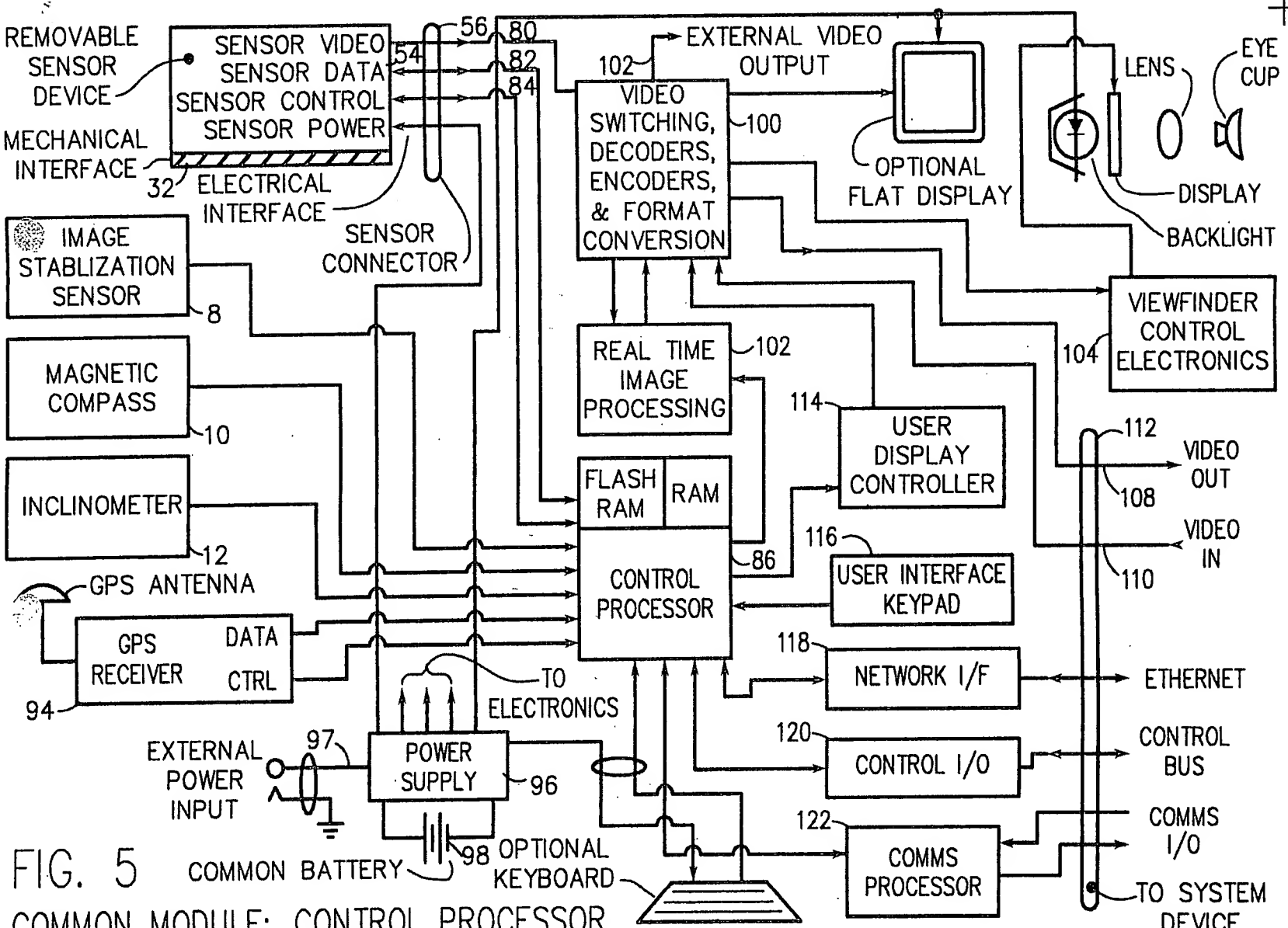


FIG. 5 COMMON MODULE: CONTROL PROCESSOR

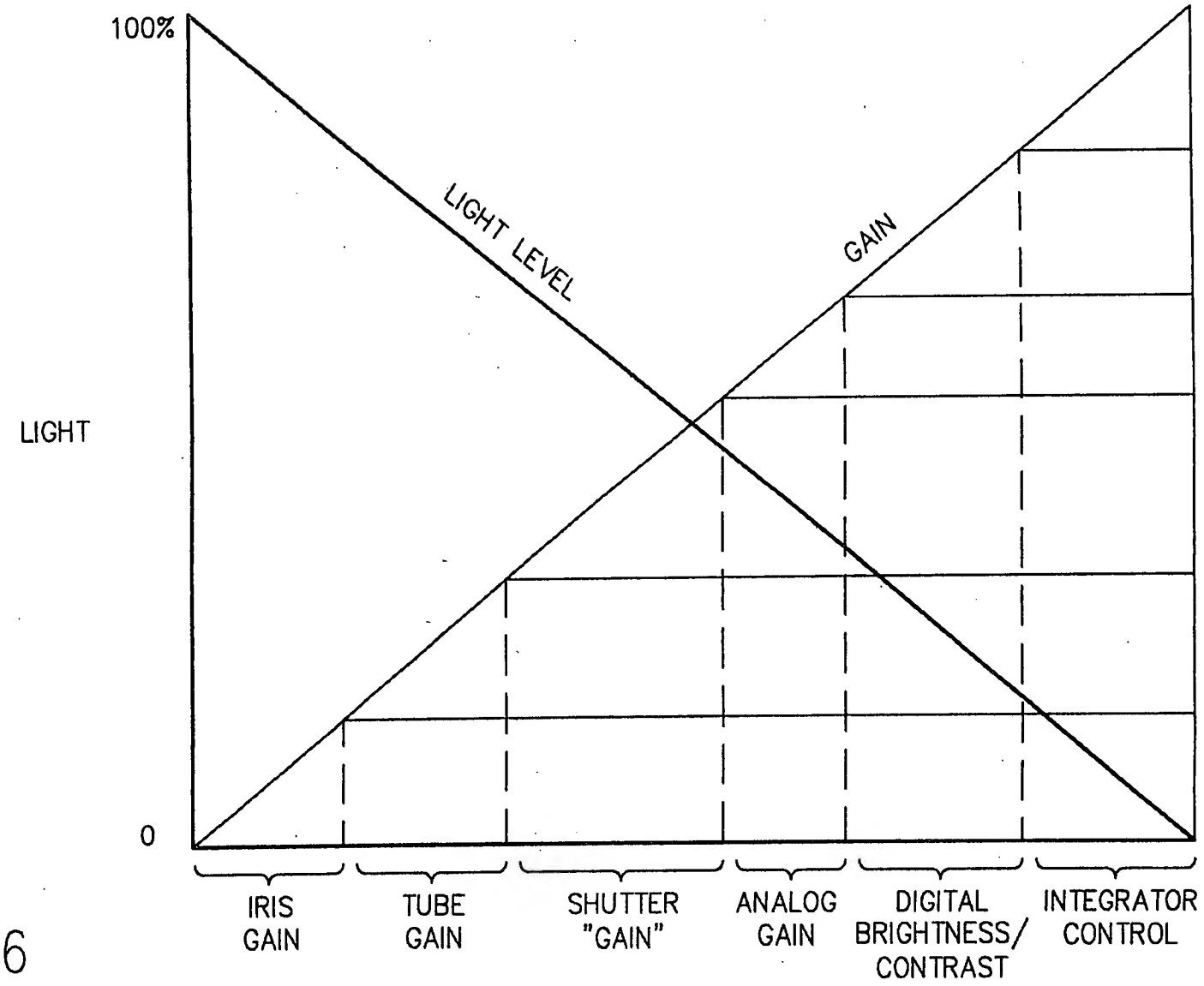

100%
LIGHT
0
LIGHT LEVEL
GAIN
IRIS GAIN
TUBE GAIN
SHUTTER "GAIN"
ANALOG GAIN
DIGITAL BRIGHTNESS/ CONTRAST
INTEGRATOR CONTROL

FIG. 6

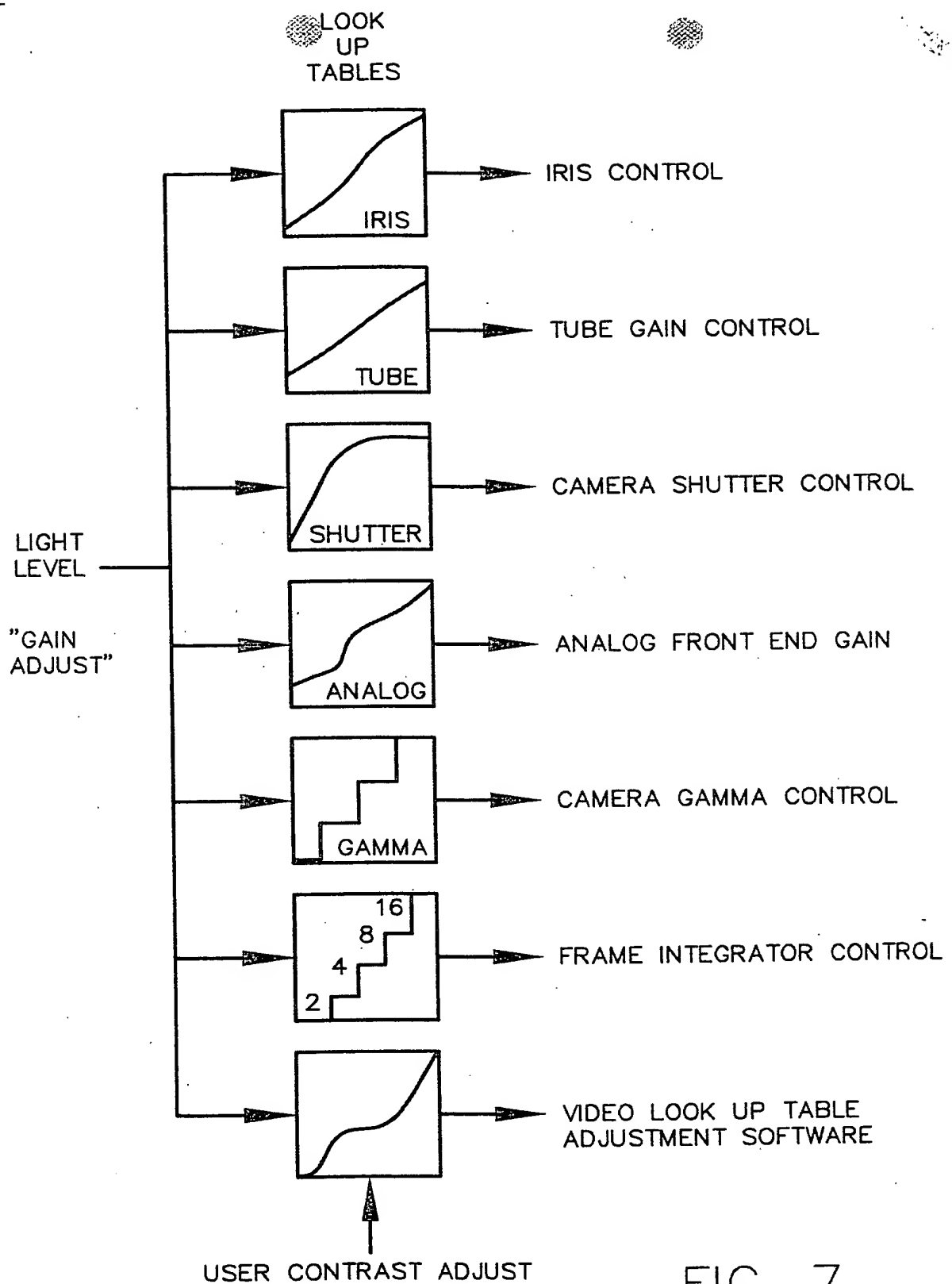

LOOK UP TABLES
IRIS
IRIS CONTROL
TUBE
TUBE GAIN CONTROL
SHUTTER
CAMERA SHUTTER CONTROL
LIGHT LEVEL
"GAIN ADJUST"
ANALOG
ANALOG FRONT END GAIN
GAMMA
CAMERA GAMMA CONTROL
16
8
4
2
FRAME INTEGRATOR CONTROL
VIDEO LOOK UP TABLE ADJUSTMENT SOFTWARE
USER CONTRAST ADJUST

FIG. 7

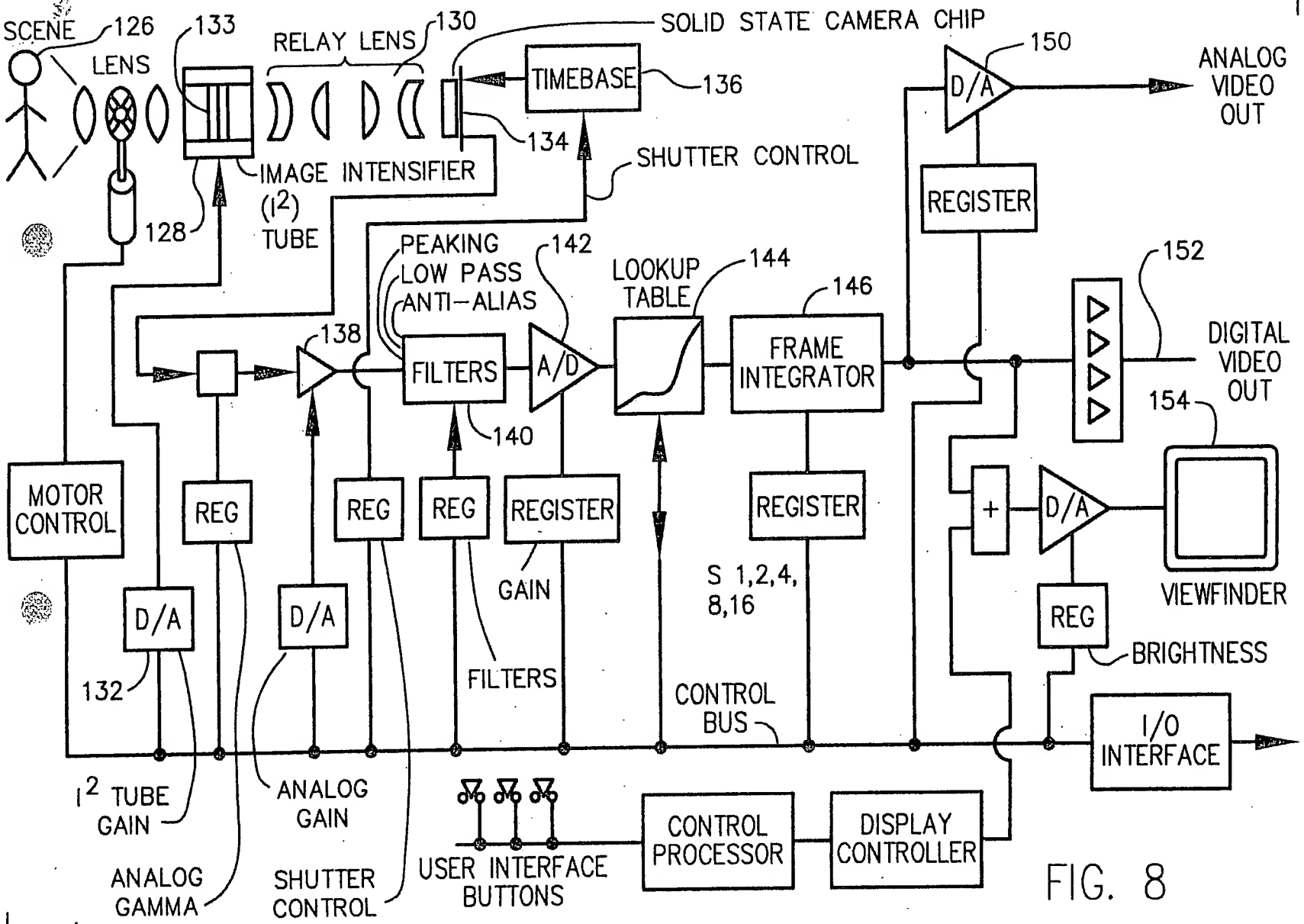


FIG. 8

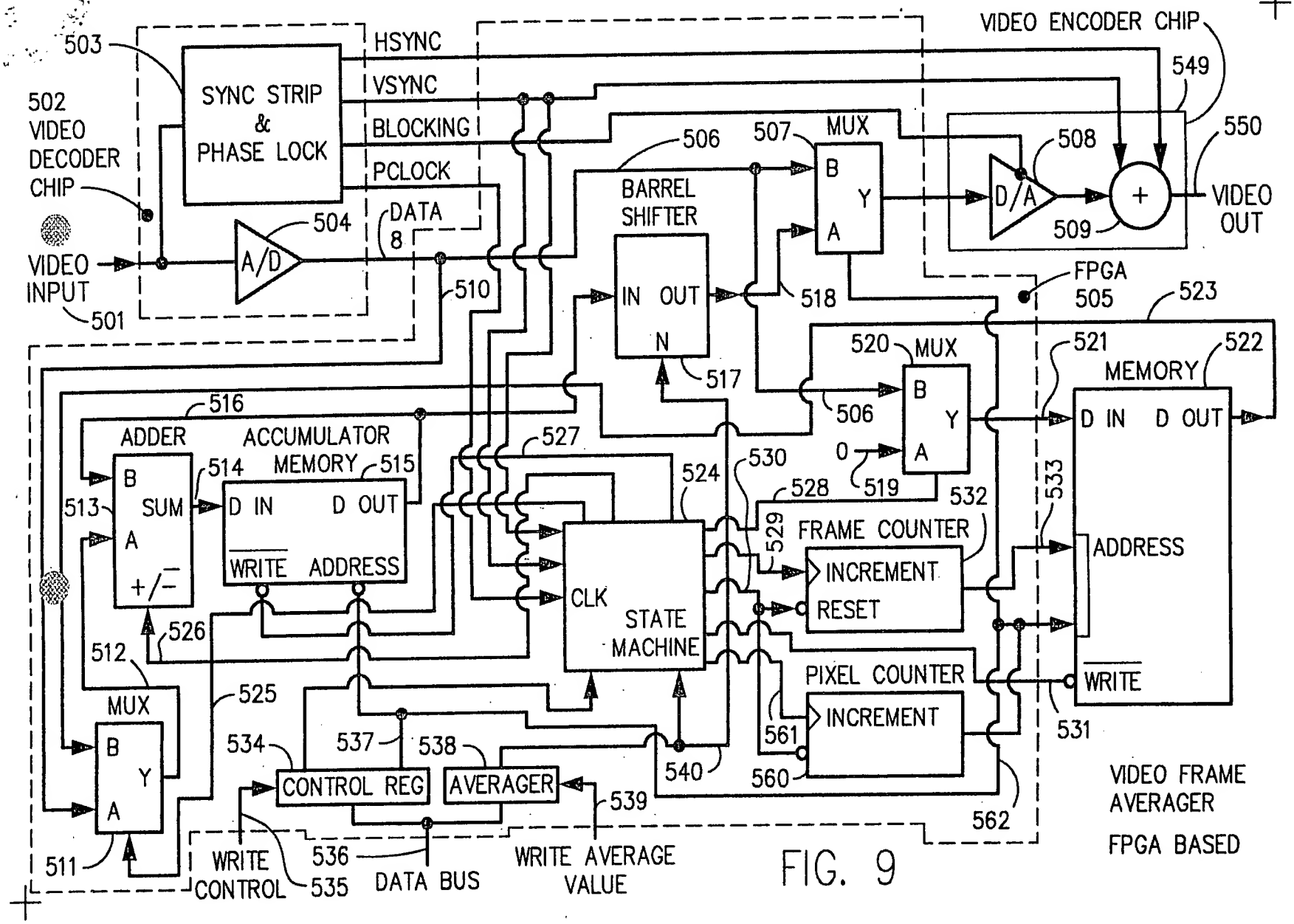


FIG. 9

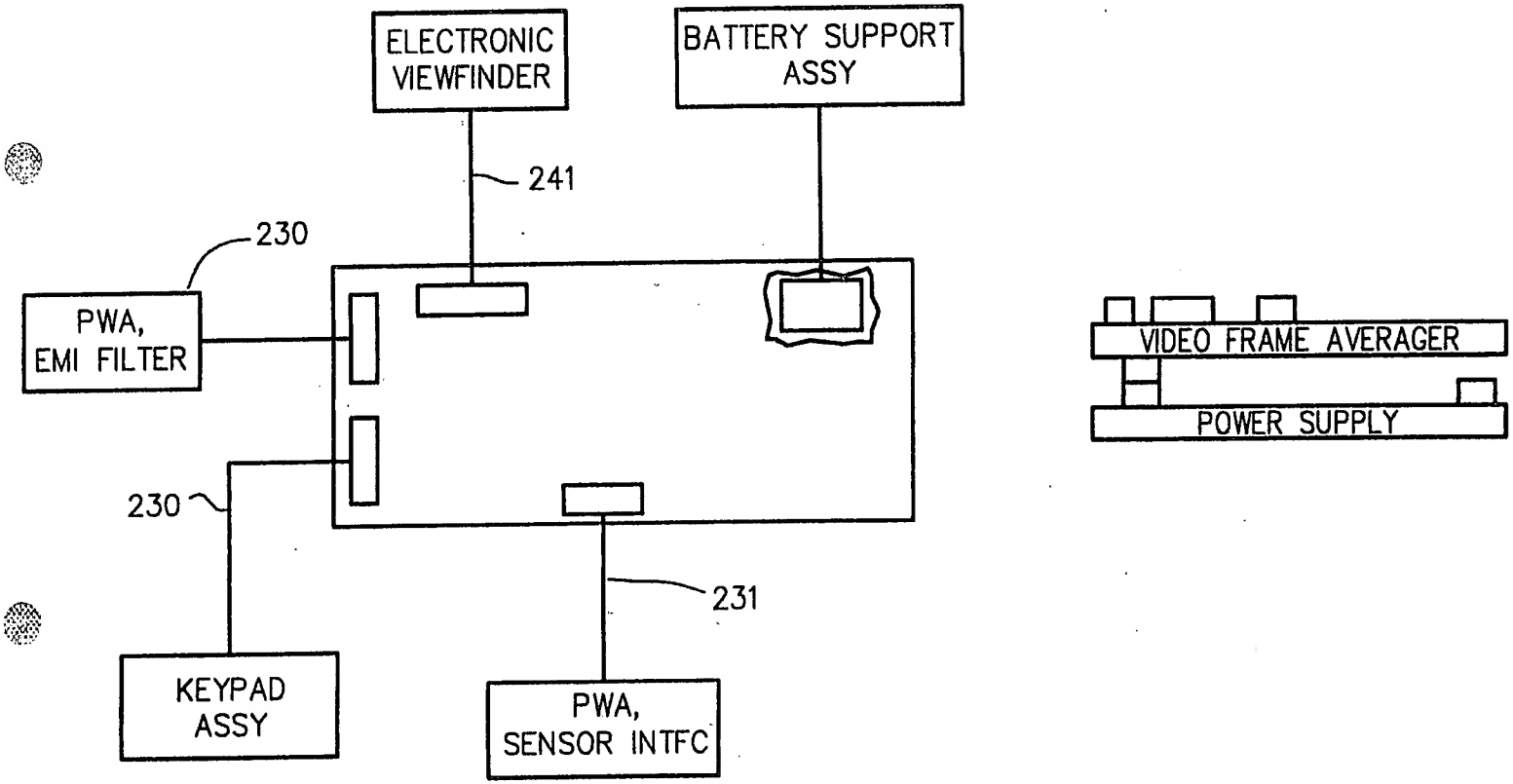
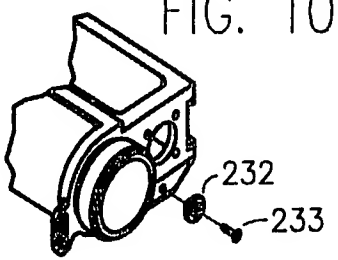
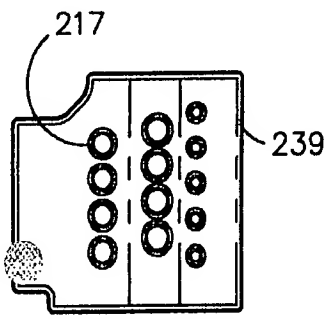


FIG. 10

FIG. 10b





ADHESIVE GUIDE FOR APPLICATION OF HAND GRIP

FIG. 10a

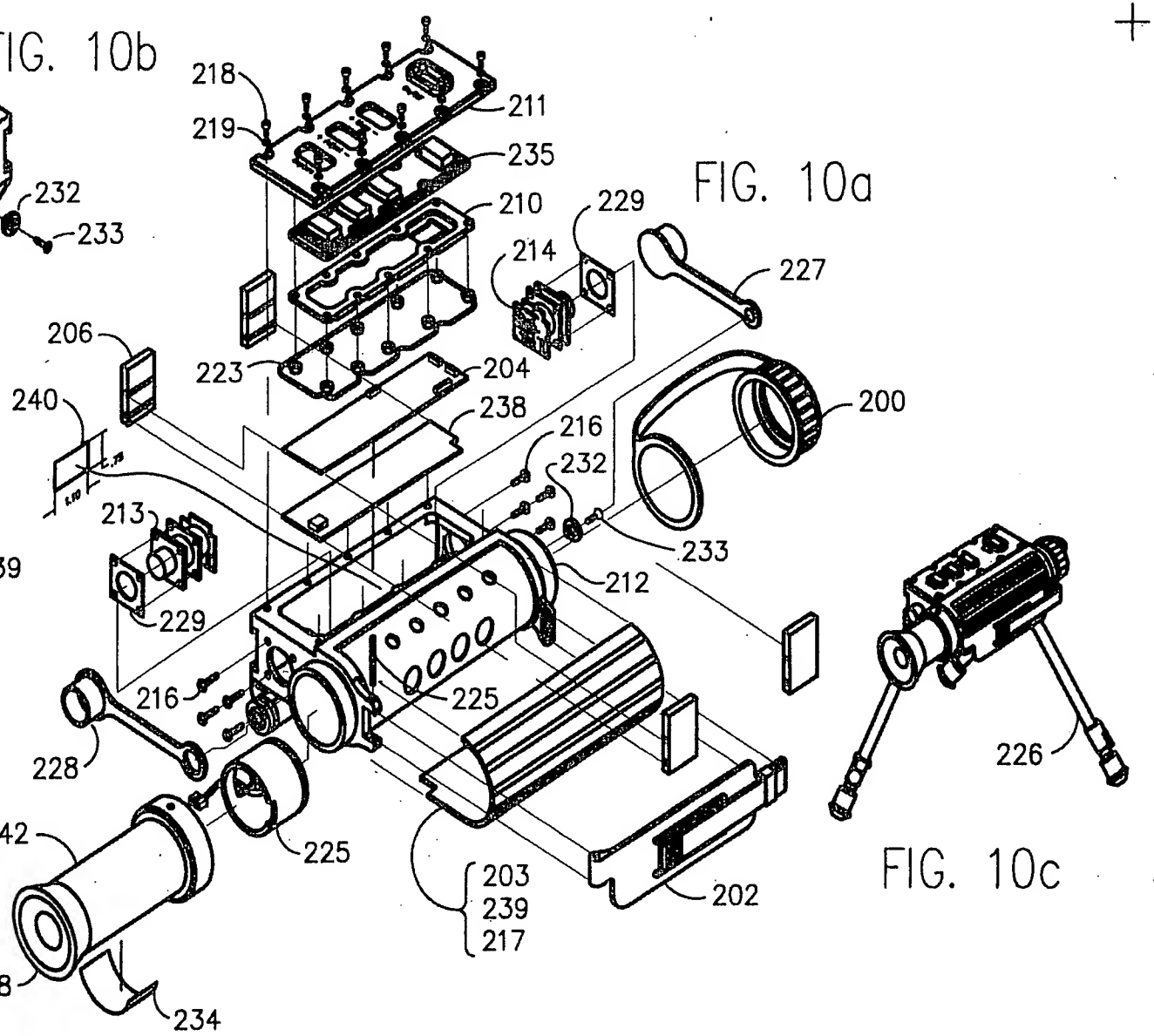


FIG. 10c

10005004.051901

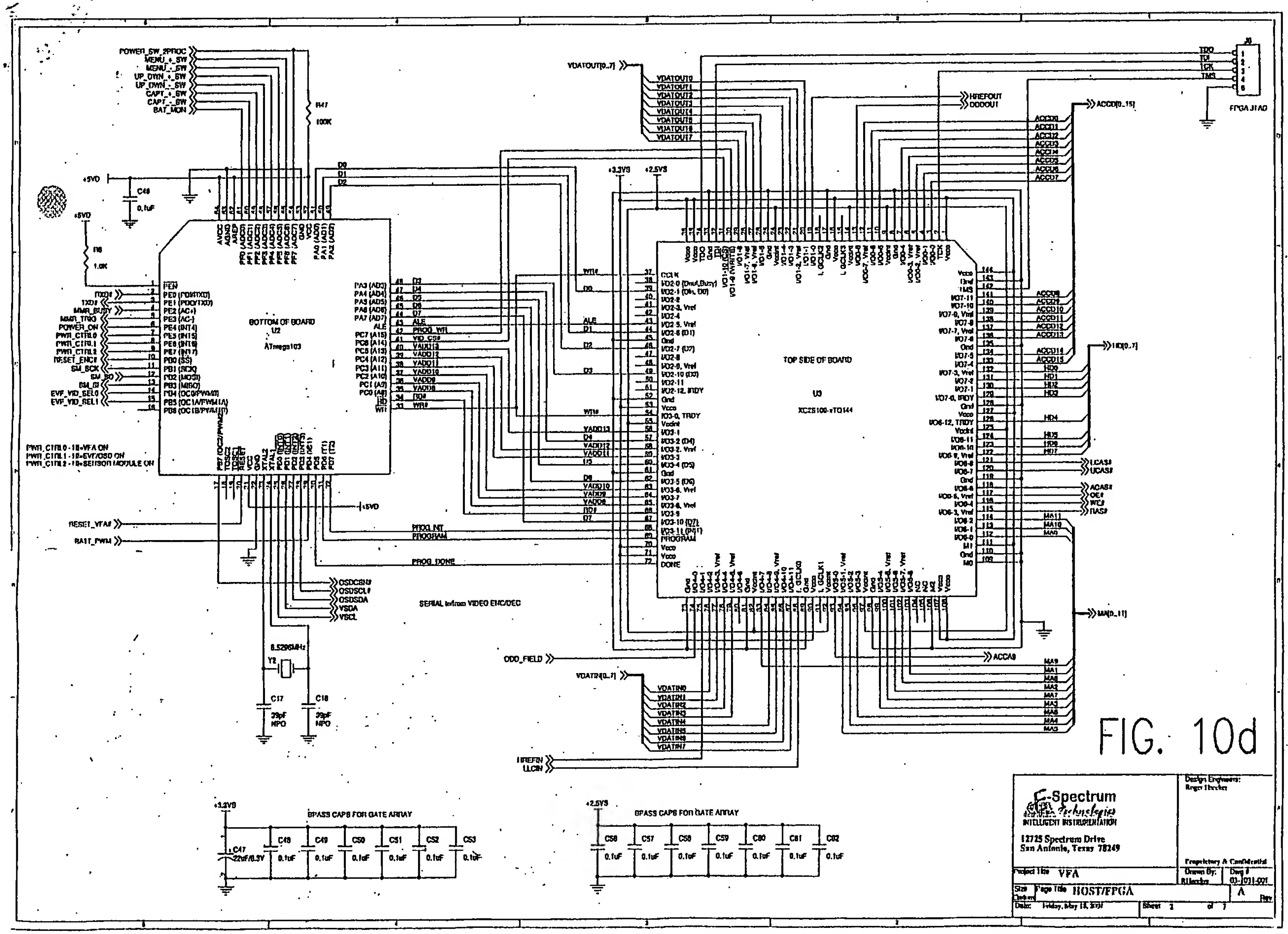


FIG. 10d

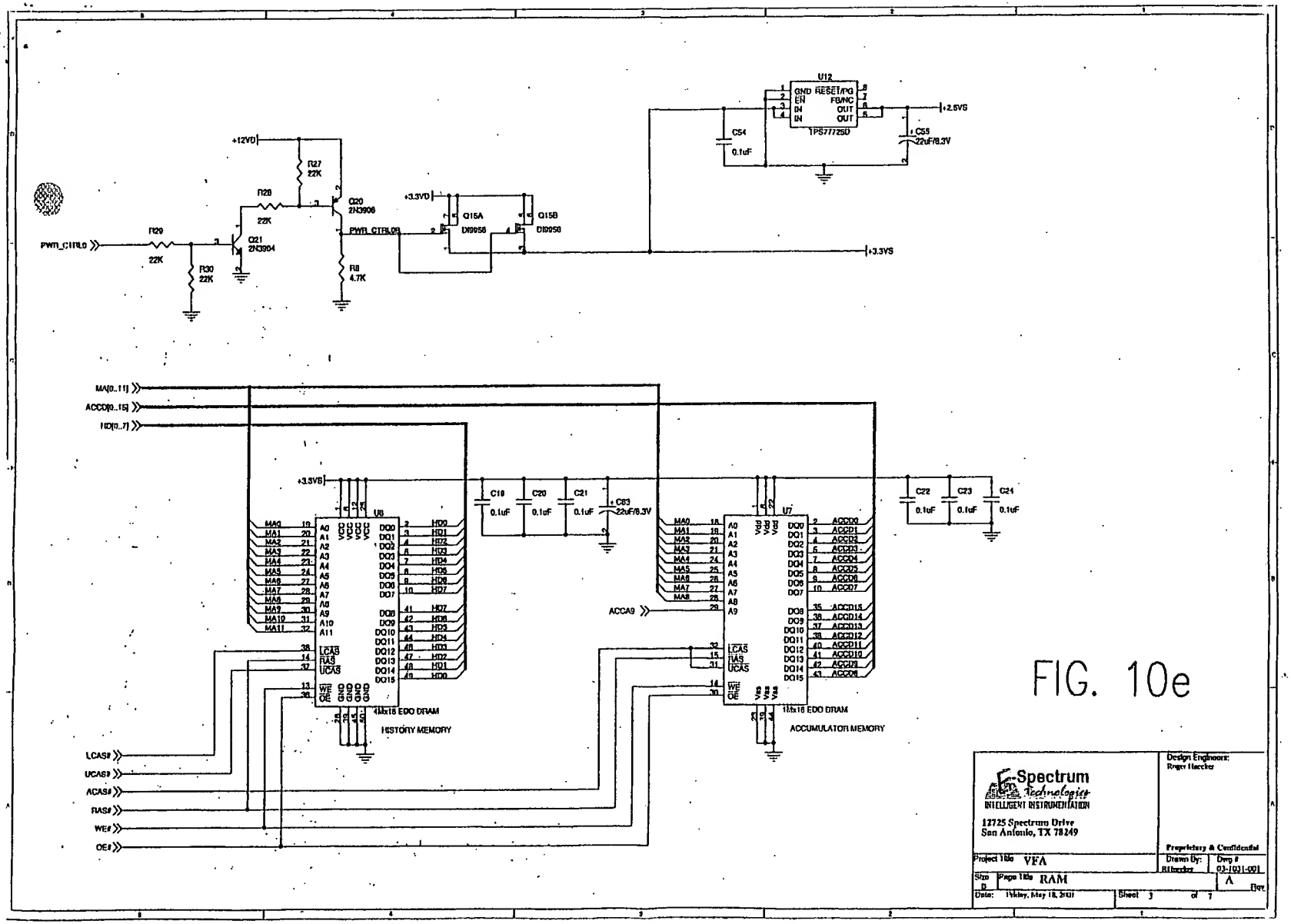


FIG. 10e

Spectrum Technologies
INTELLIGENT INSTRUMENTATION
12725 Spectrum Drive
San Antonio, TX 78249

Design Engineer: Roger Hoecker
Proprietary & Confidential
Project Title: VFA
Drawn By: RHoecker
Dwg #: 03-1031-001
Size: D
Page Title: RAM
Rev: A
Date: Friday, May 18, 2001
Sheet 3 of 7

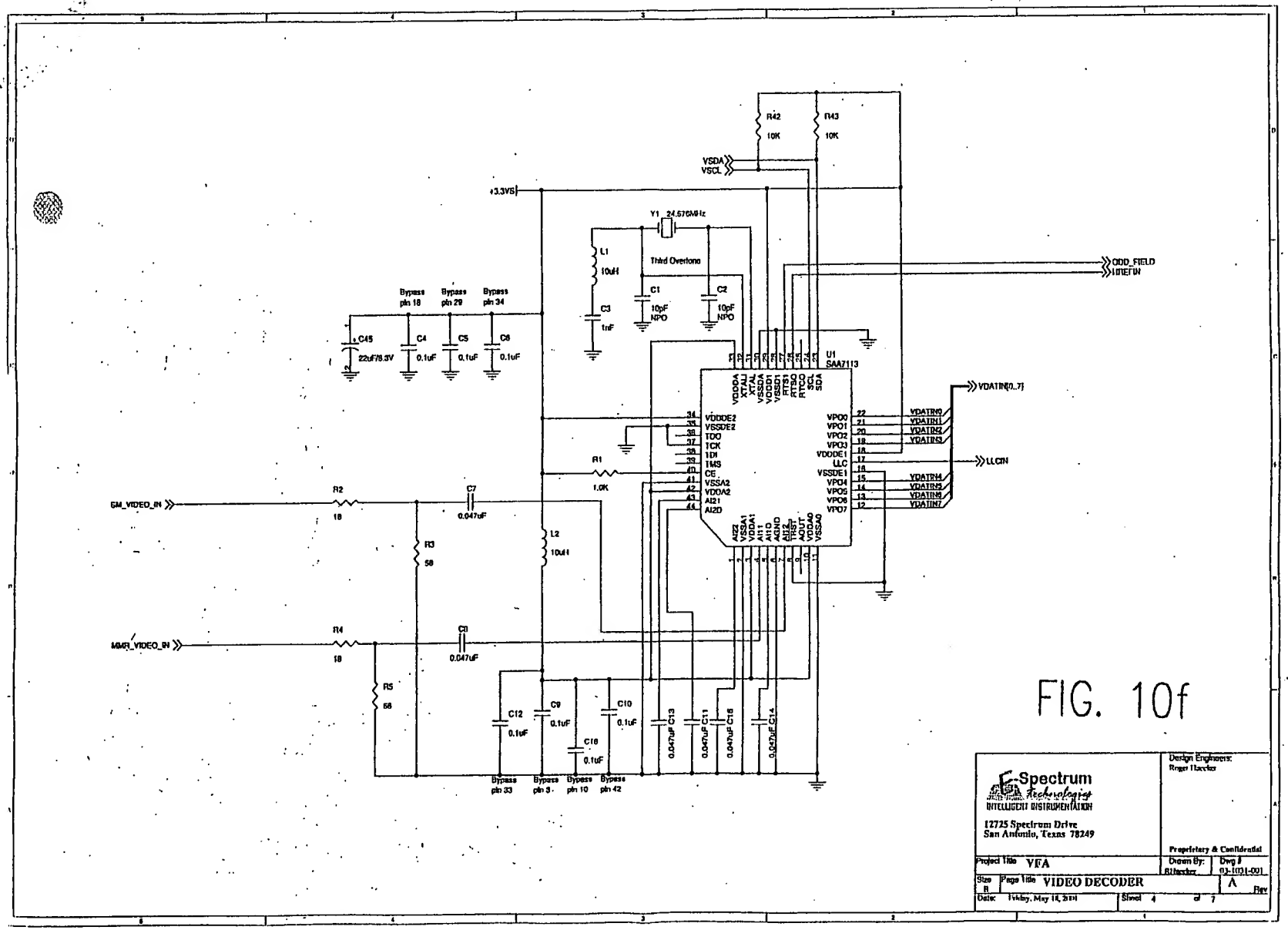


FIG. 10f

Spectrum Technologies
INTELLIGENT INSTRUMENTATION
12725 Spectrum Drive
San Antonio, Texas 78249

Design Engineers:
Roger Hatcher

Proprietary & Confidential

Project Title: VFA		Drawn By: RHatcher	Dwg #: 03-1031-001
Size: B	Page Title: VIDEO DECODER		Rev: A
Date: Friday, May 18, 2001	Sheet: 4 of 7		

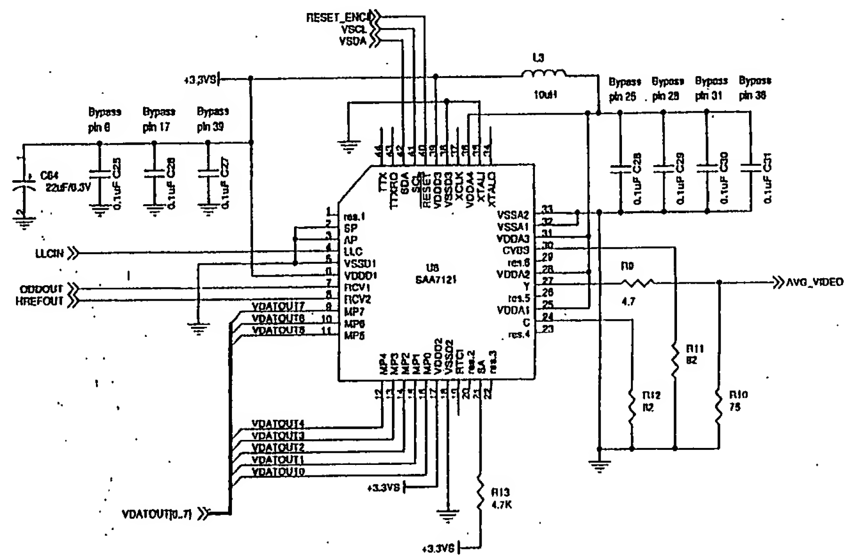


FIG. 10g

Spectrum Technologies INTELLIGENT INSTRUMENTATION 12725 Spectrum Drive San Antonio, Texas 78249	Design Engineers: Roger Haecker Proprietary & Confidential	
Project Title VFA	Drawn By: RHaecker	Dwg # 03-1031-001
Size B	Page Title VIDEO ENCODER	A Rev
Date: Friday, May 18, 2001	Sheet 5 of 7	

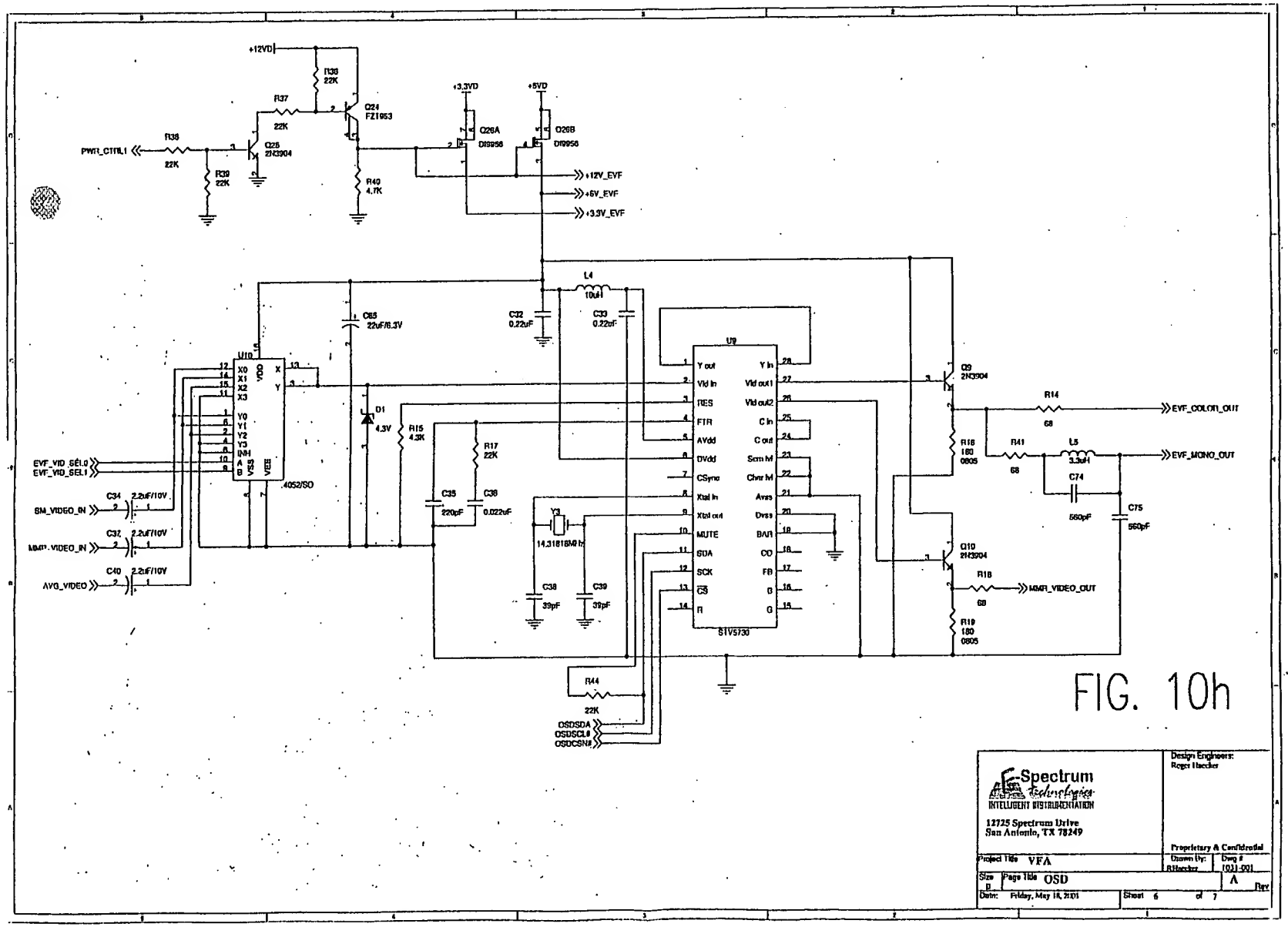

+12VD
R36 22K
R37 22K
Q24 FZ1953
+3.3VD
+5VD
Q26A
Q26B
DI9956
PWR_CTRL1
R38 22K
Q25 2N3904
R39 22K
R40 4.7K
+12V_EVF
+5V_EVF
+3.3V_EVF
L4 10uH
C85 22uF/6.3V
C32 0.22uF
C30 0.22uF
U10
4052/SO
D1 4.3V
R15 4.3K
R17 22K
C35 220pF
C36 0.022uF
EVF_VID_SEL0
EVF_VID_SEL1
C34 2.2uF/10V
SM_VIDEO_IN
C37 2.2uF/10V
MNTR_VIDEO_IN
C40 2.2uF/10V
AVG_VIDEO
Y3 14.31818MHz
C38 39pF
C39 39pF
U9
STV5730
R44 22K
OSDSDA
OSDSCL0
OSDCSN0
Q9 2N3904
Q10 2N3904
R14 68
R16 180 0805
R41 68
L5 3.3uH
C74 560pF
C75 560pF
R18 68
R19 180 0805
EVF_COLOR_OUT
EVF_MONO_OUT
MNTR_VIDEO_OUT
E-Spectrum Technologies
INTELLIGENT DISTRIBUTION
12725 Spectrum Drive
San Antonio, TX 78249
Design Engineers:
Roger Haecker
Proprietary & Confidential
Project Title VFA
Drawn By: RHaecker
Dwg # 1021-001
Size B
Page Title OSD
Rev A
Date: Friday, May 18, 2001
Sheet 6 of 7

FIG. 10h

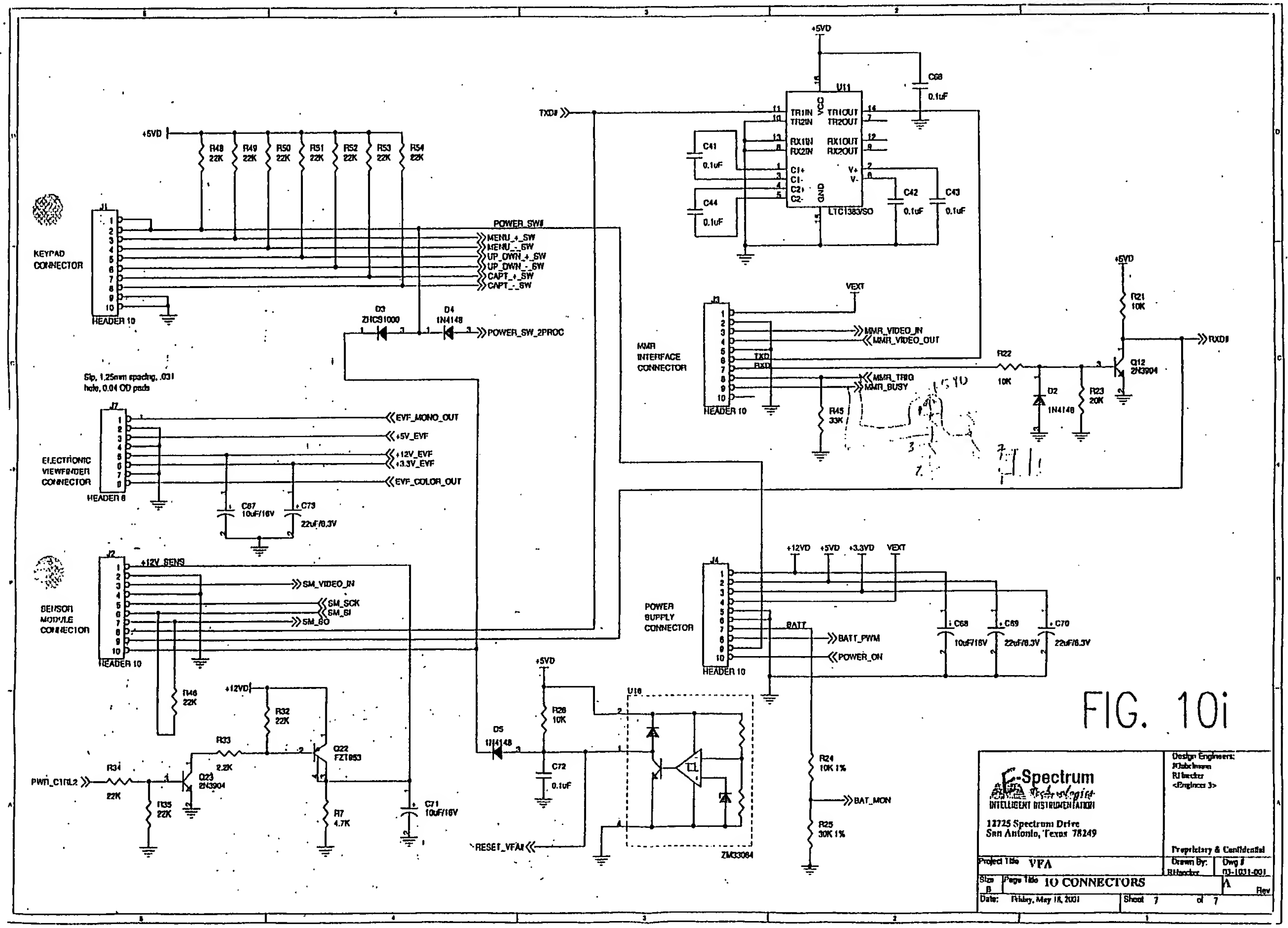
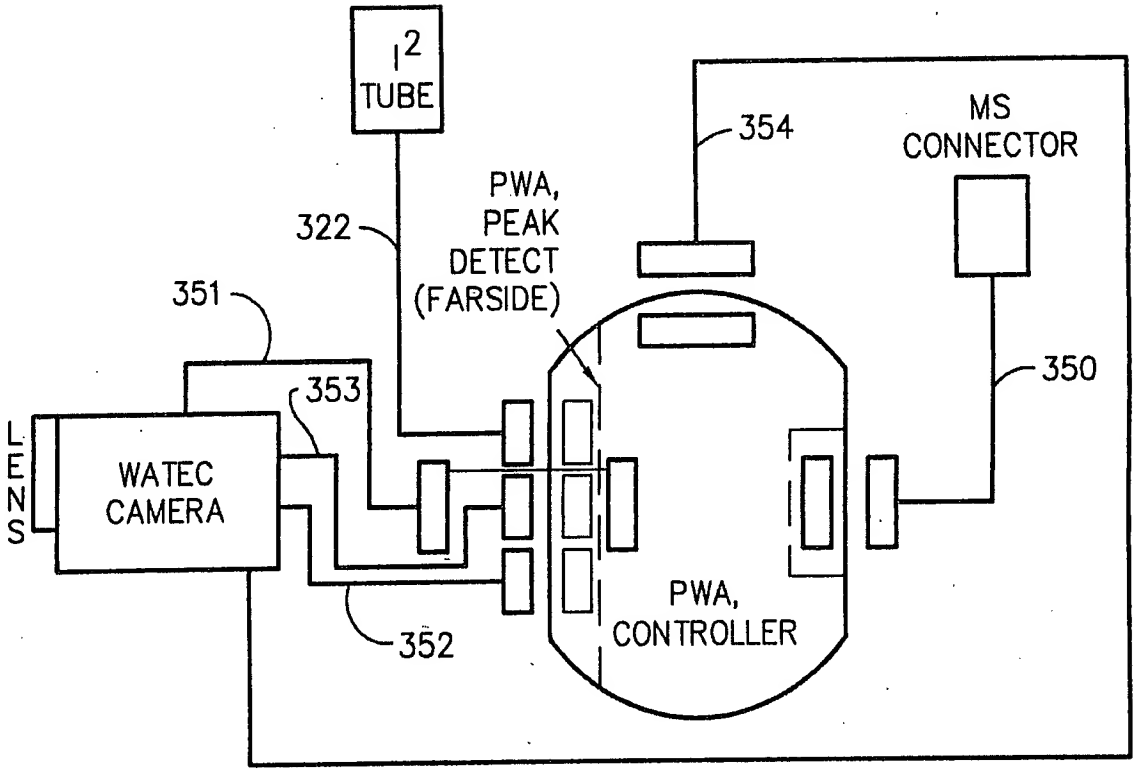
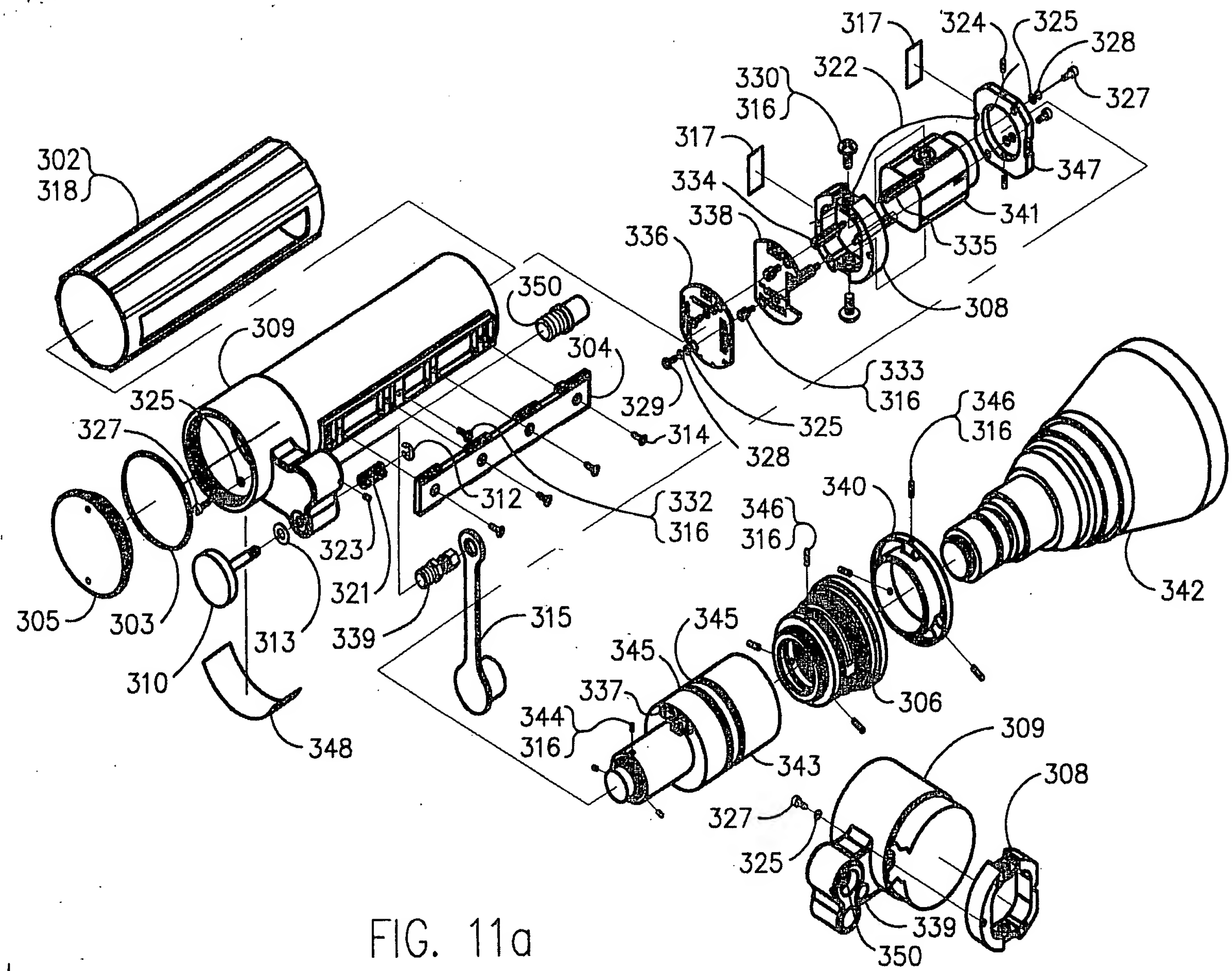

KEYPAD CONNECTOR
ELECTRONIC VIEWFINDER CONNECTOR
SENSOR MODULE CONNECTOR
MMR INTERFACE CONNECTOR
POWER SUPPLY CONNECTOR
Slp, 1.25mm spacing, .031 hole, 0.04 OD pads
POWER_SW#
MENU_+_SW
MENU_-_SW
UP_DWN_+_SW
UP_DWN_-_SW
CAPT_+_SW
CAPT_-_SW
POWER_SW_2PROC
EVF_MONO_OUT
+5V_EVF
+12V_EVF
+3.3V_EVF
EVF_COLOR_OUT
+12V_SENS
SM_VIDEO_IN
SM_SCK
SM_SI
SM_SO
PWR_CTRL2
RESET_VFA#
TXD#
RXD#
MMR_VIDEO_IN
MMR_VIDEO_OUT
MMR_TRIG
MMR_BUSY
BATT
BATT_PWM
POWER_ON
BAT_MON
LTC1383/SO
ZM33064
Spectrum Technologies
INTELLIGENT INSTRUMENTATION
12725 Spectrum Drive
San Antonio, Texas 78249
Design Engineers:
Proprietary & Confidential
Project Title VFA
Page Title IO CONNECTORS
Date: Friday, May 18, 2001
Sheet 7 of 7

FIG. 10i



CONNECTION DIAGRAM

FIG. 11



302
318
309
325
327
305
303
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313
348
323
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332
316
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308
333
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343
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309
308
327
325
339
350

FIG. 11a

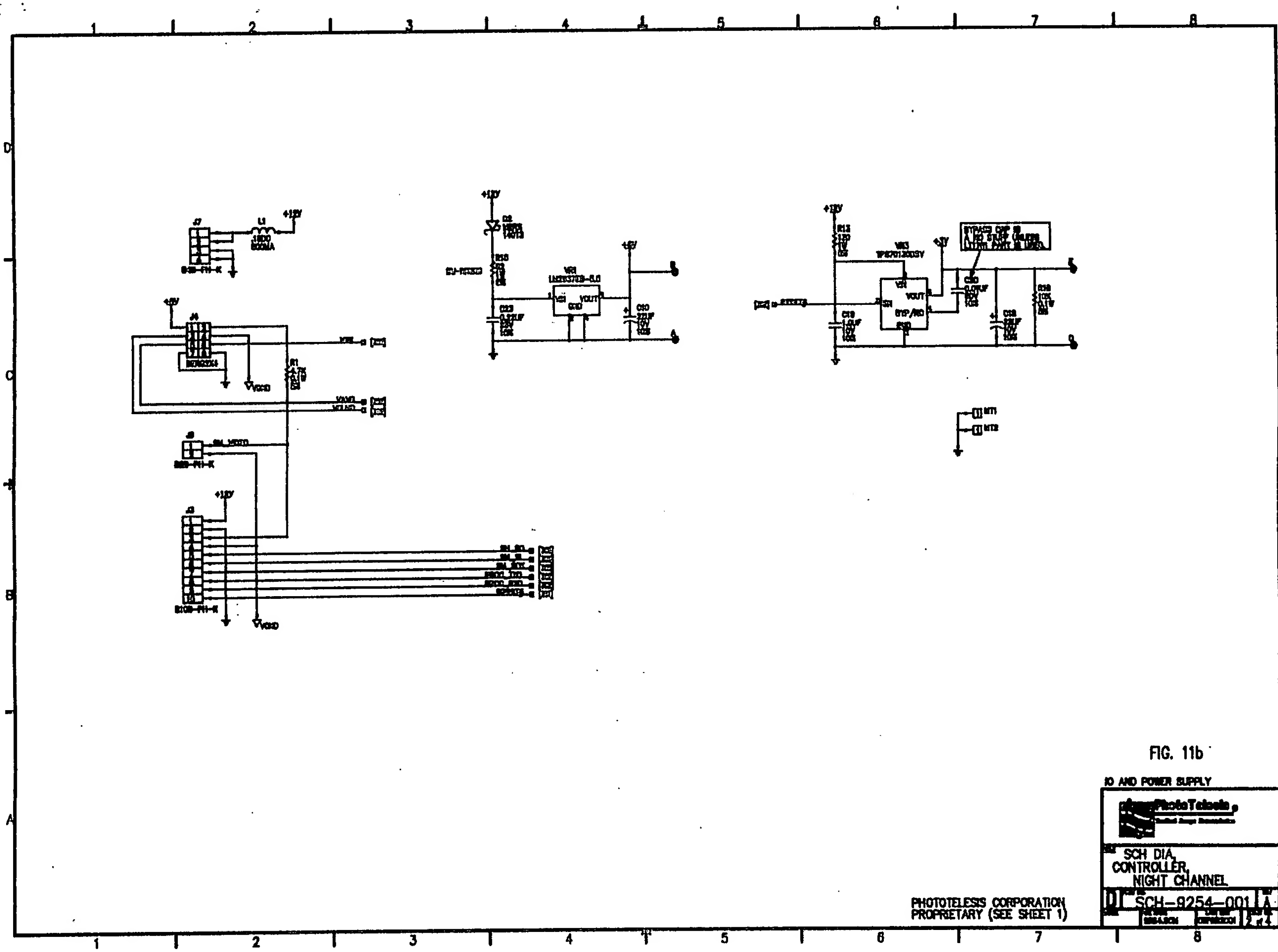

IO AND POWER SUPPLY
SCH DIA, CONTROLLER, NIGHT CHANNEL
SCH-9254-001
A
PHOTOTELESIS CORPORATION
PROPRIETARY (SEE SHEET 1)
+12V
+5V
J7
J3
L1
R1
VR1
VR3
VOUT
VGND

FIG. 11b

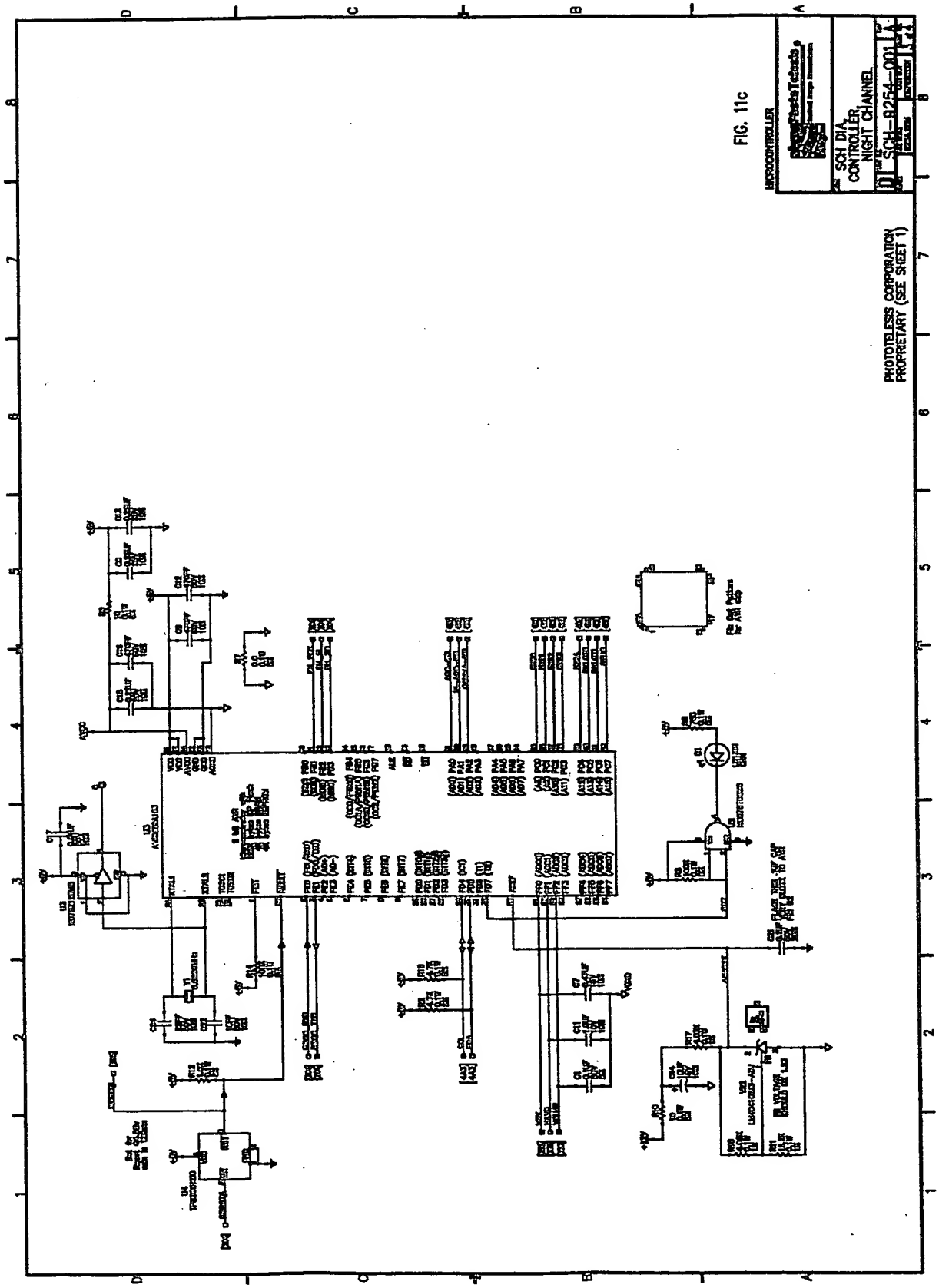

SCH DIA
CONTROLLER,
NIGHT CHANNEL
SCH-8254-001
PHOTOTELESIS CORPORATION
PROPRIETARY (SEE SHEET 1)

FIG. 11c

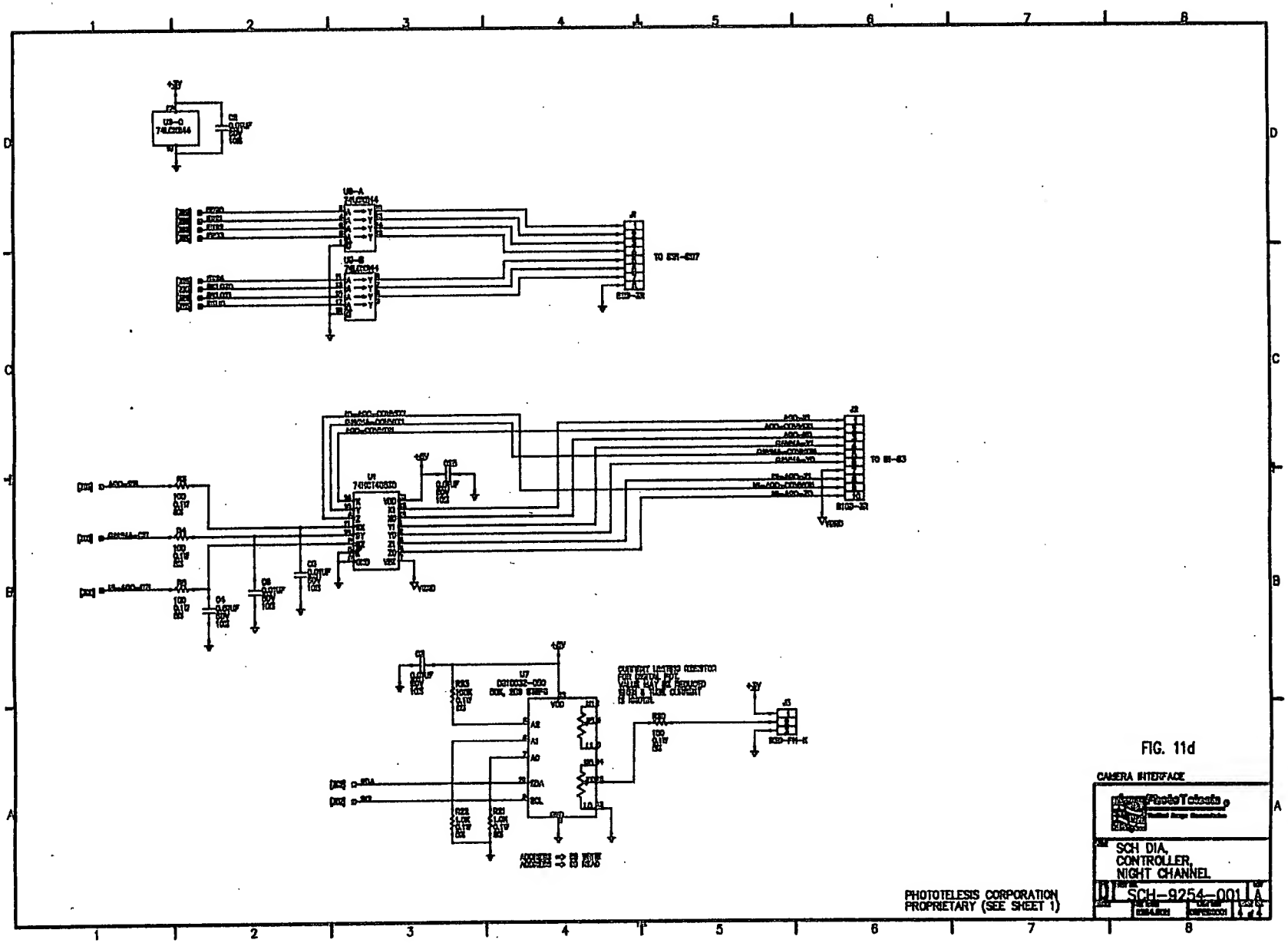
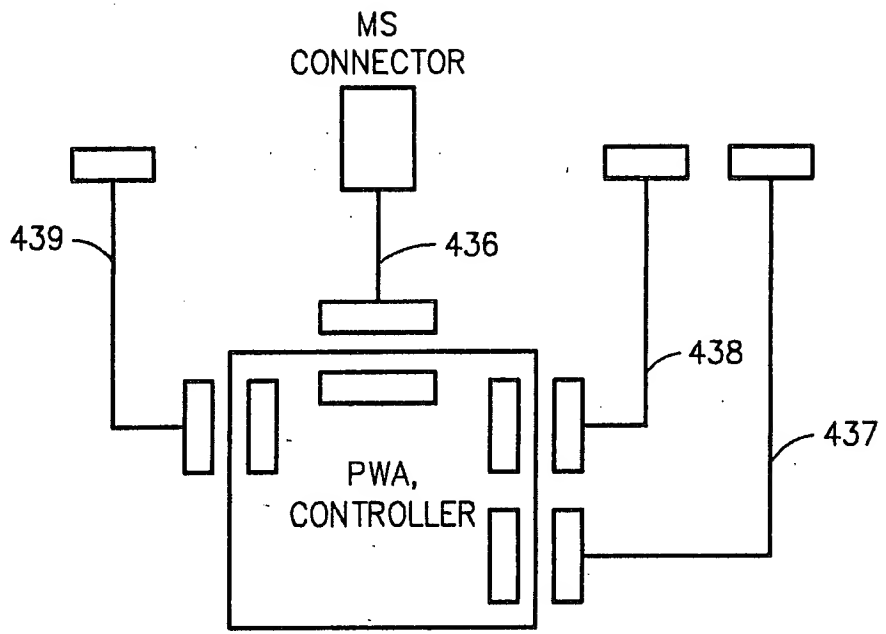


FIG. 11d



CONNECTION DIAGRAM

FIG. 12

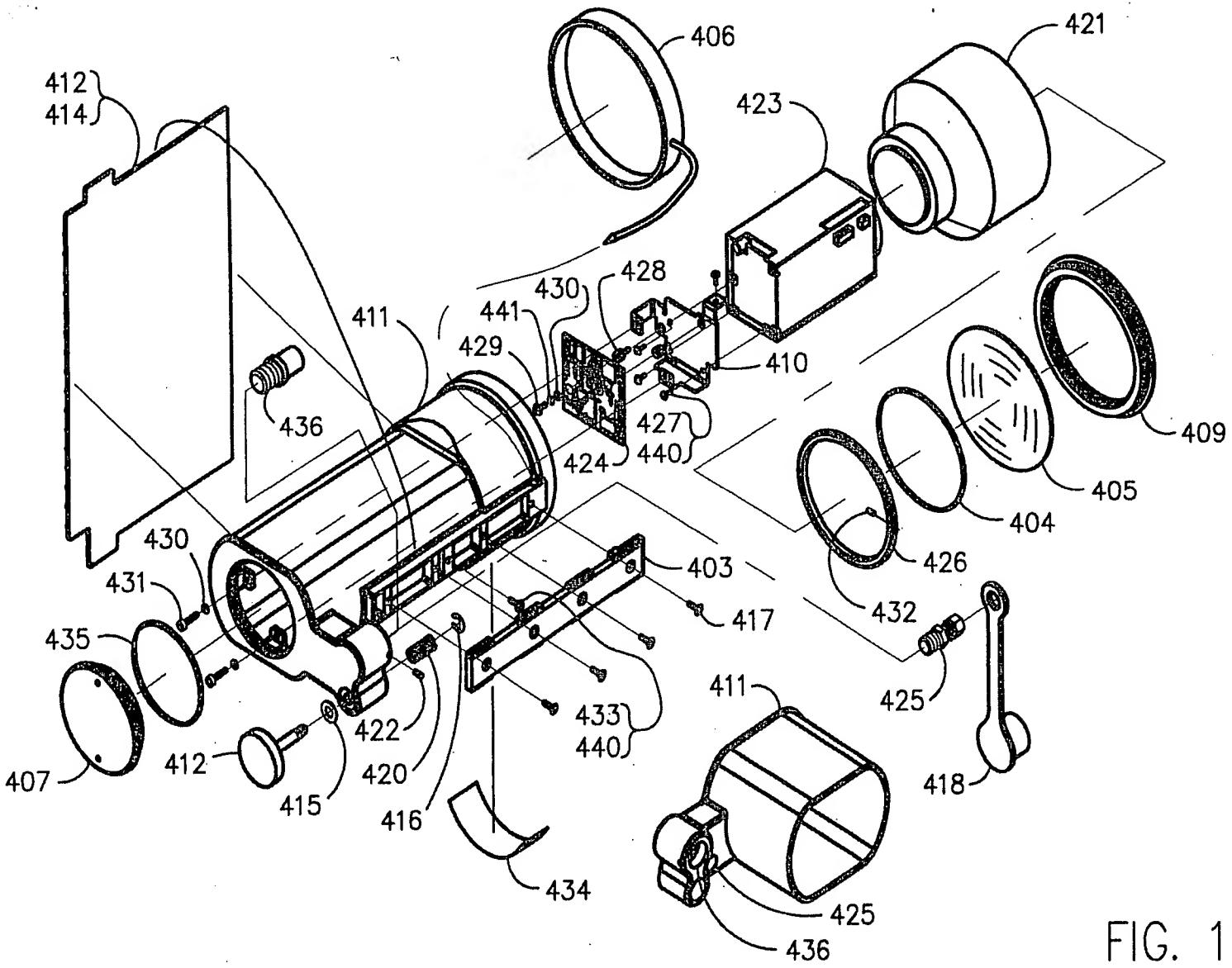


FIG. 12a

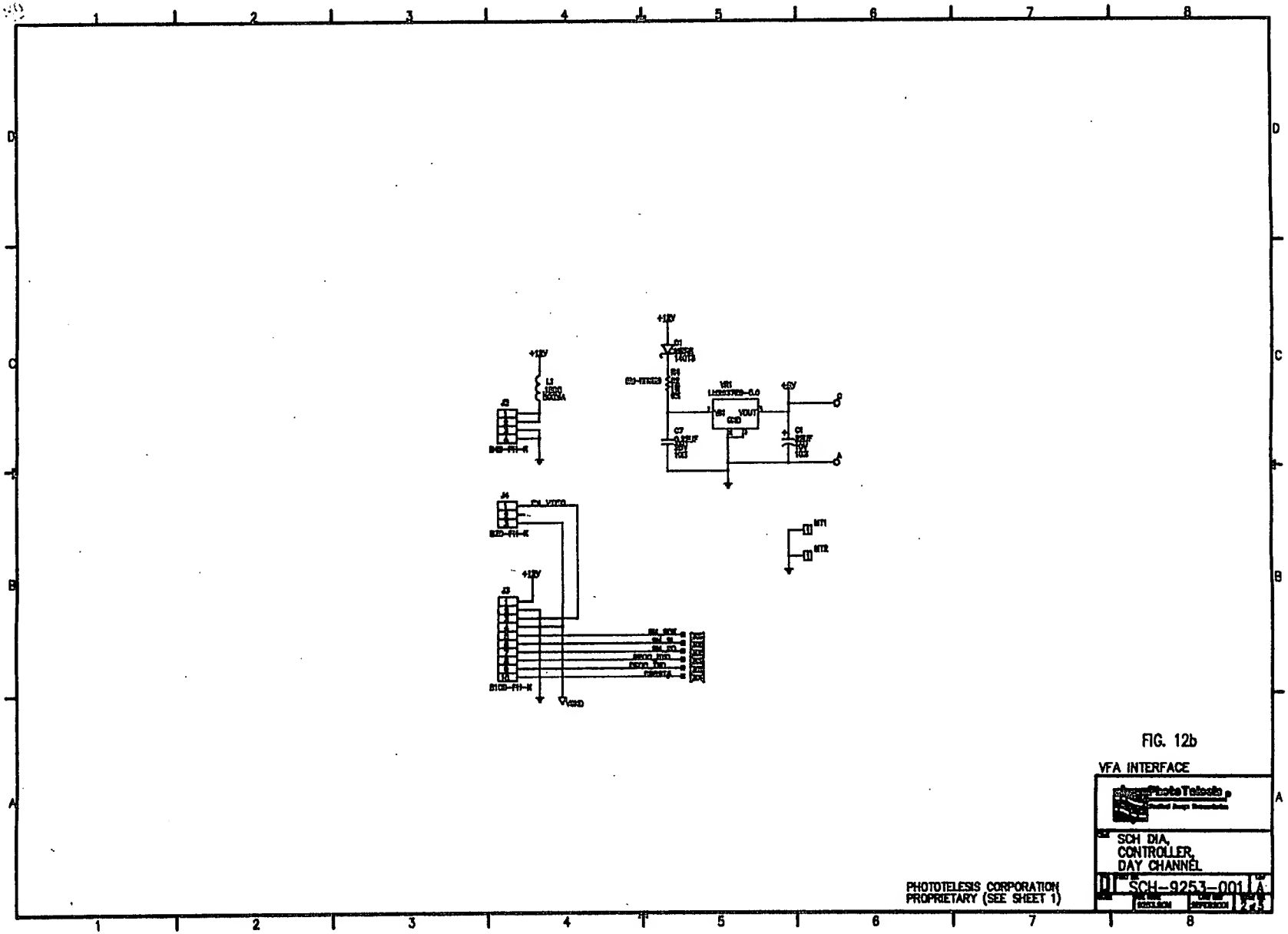


FIG. 12b

VFA INTERFACE

PHOTOTELESIS CORPORATION
PROPRIETARY (SEE SHEET 1)

PhotoTelesis

SCH DIA,
CONTROLLER,
DAY CHANNEL

SCH-9253-001

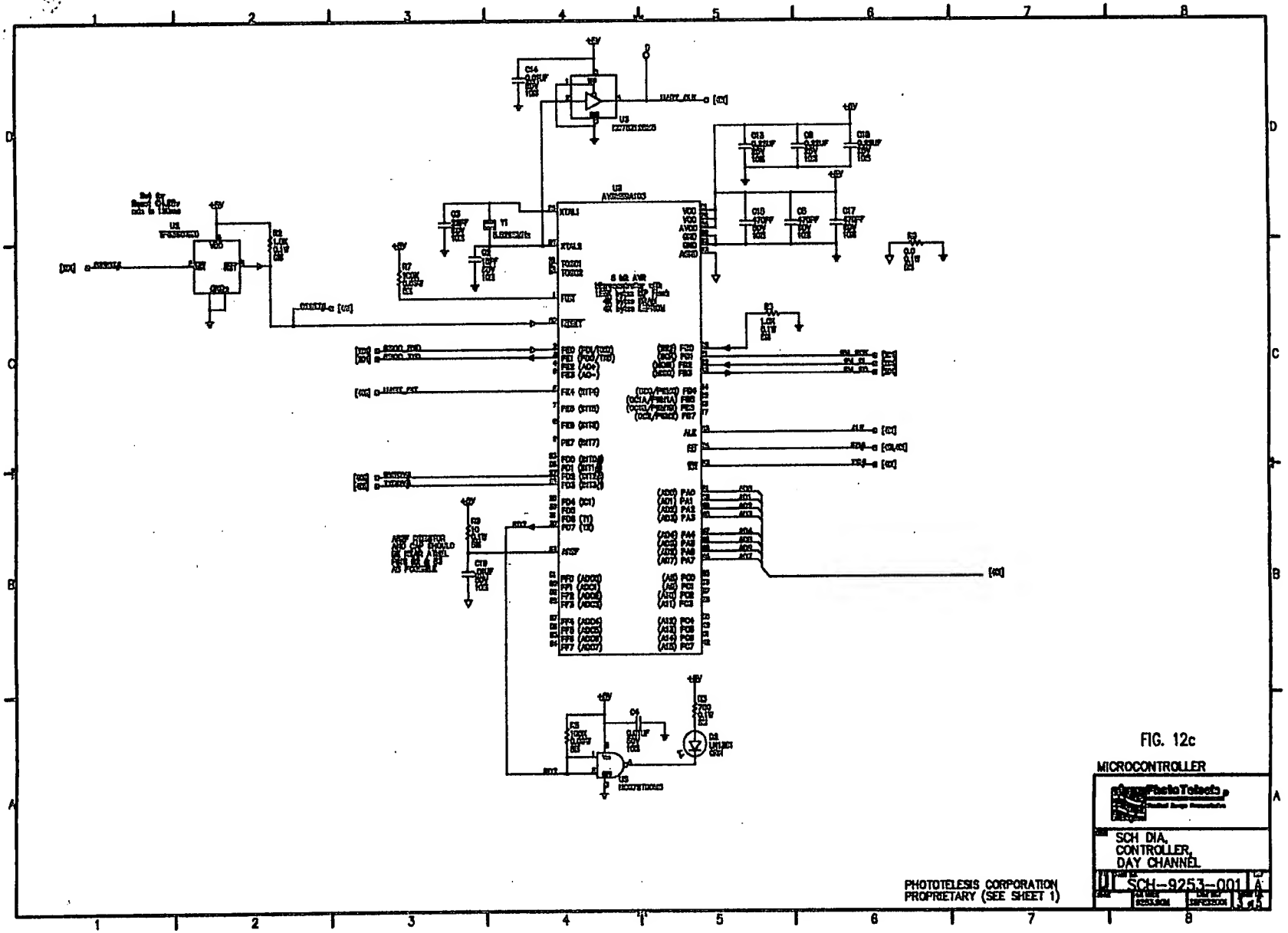


FIG. 12c

MICROCONTROLLER

PHOTOTELESIS CORPORATION
PROPRIETARY (SEE SHEET 1)

PhotoTelesis

SCH DIA,
CONTROLLER,
DAY CHANNEL

SCH-9253-001

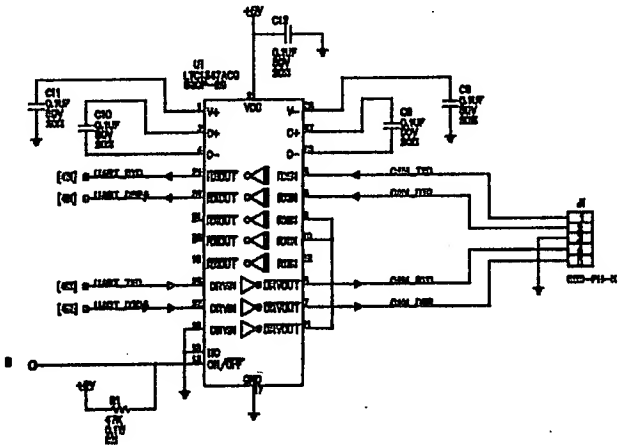


FIG. 12d

RS-232 INTERFACE

PHOTOTELESIS CORPORATION
PROPRIETARY (SEE SHEET 1)

SCH DIA,
CONTROLLER,
DAY CHANNEL

SCH-9253-001 A